Towards whole-of-system action to promote physical activity – a cross-sectoral analysis of physical activity policy in Australia

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ABSTRACT

Background: The value of a systems thinking (ST) approach to tackling population physical inactivity is increasingly recognised. This study used conceptual ST to develop a cognitive map for physical activity (PA) influences and intervention points, which informed a standardised approach to the coding and notation of PA-related policies in Australia.

Methods: Policies were identified through desktop searches and input from 33 nominated government representatives attending two national PA policy workshops. Documents were audited using pre-defined criteria spanning policy development, strategic approaches to PA, implementation processes and evaluation. Data were analysed using descriptive statistics.

Results: The audit included 110 policies, mainly led by the health or planning/infrastructure sectors (n=54, 49%). Most policies purporting to promote PA did so as a co-benefit of another objective that was not focused on PA (n=63, 57%). An intention to monitor progress was indicated in most (n=94, 85%), however fewer than half (n=52, 47%) contained evaluable goals/actions relevant to PA. Descriptions of resourcing/funding arrangements were generally absent or lacked specific commitment (n=67, 61%).

Conclusions: This study describes current PA-relevant policy in Australia, and identifies opportunities for improving coordination, implementation and evaluation to strengthen a whole-of-system and cross-agency approach to increasing population PA.

INTRODUCTION

As the global burden of non-communicable disease (NCD) continues to rise, so does the importance of tackling physical inactivity which is a common and modifiable NCD risk factor. Evidence about the contribution that inactivity makes to avoidable morbidity and mortality is well established,[1] and the accumulated economic case for reducing this risk factor is also compelling.[2,3] Yet, despite extensive international research efforts and the identification of an array of effective interventions,[4,5] available trend data show that the prevalence of physical inactivity has mostly remained stable over the past 15 years worldwide,[6] and over 22 years in Australia.[7] National governments have been urged to prioritise this issue and commit to multifaceted policies and programs that address the socio-ecological determinants of inactivity.[8,9] The World Health Organization's Global Action Plan on Physical Activity (GAPPA)[10] has stipulated 4 strategic objectives including 'active societies', 'active environments', 'active people' and 'active systems', whilst identifying explicit policy actions to guide the comprehensive approach required to tackle inactivity within populations.

The engagement of diverse sectors (such as health, sport, transport and planning) has been identified as essential to delivering the broad scope of policy action required to address the multiple determinants of physical activity (PA).[11] Whilst such a broad field for policy development offers substantial opportunities, it also holds potential risks, inherent within the challenge of achieving and maintaining a coordinated response across Australia's federated system of independent national, State and Territory governments.[12] Typically, these risks present themselves as uncoordinated policy actions, piecemeal planning and patchy implementation. The necessary mitigation strategies involve strengthening communications across jurisdictions and forging a common strategic approach based on cross-sectoral partnerships that can enable the institutionalisation of sustainable policy actions within the routine business of stakeholder organisations.[13] Aspirations to achieve coordinated, embedded actions to address physical inactivity will be more likely to succeed if this issue is understood as a policy development task that has health and social implications, as well as political, organisational, economic and cultural challenges.[14]

Systematic policy analysis studies have been conducted nationally and internationally to examine the nature, quality and implementation of PA promotion policies, and to identify factors requiring further attention. A study in Finland reported on the policies of different sectors (i.e., health, education, transport) that had enabled a shift from a primary focus on sports participation to a broader approach to health-enhancing PA, and identified the political, social and economic forces that contributed to this.[15] Craig[16] examined the evolution of PA policy in Canada and recognised the prominent role of provincial coalitions and multi-strategic approaches, coupled with community development initiatives to support program delivery. One of the early comparative studies which presented case studies of PA policy in Switzerland, England and Finland, found differences attributable to cultural and political factors in each country and common barriers of resource limitations and competing priorities.[17] Several other international studies have used structured audit tools to assess the characteristics and differences in PA related-policies across nations.[18-22] These generally observed cross-sectoral engagement in the development of PA policies but noted that there was scope for this to be broadened and better coordinated in policy implementation. A lack of measurable indicators and clear plans for policy evaluation was a commonly reported weakness.

The adoption of systems thinking (ST) to public health, together with the critical analysis of required strategic interventions, has increased the perceived need for the application of ST to PA policy analysis and brought a fresh lens to guide how this is done. From a systems perspective, population levels of PA are an emergent product of the combined impact of multiple policies. At one level this highlights the importance of understanding and operationalising a whole-of-system approach to tackling physical inactivity[23], and at another level it draws attention to questions of policy coordination, alignment and interdependence.[24,25] Recognising the dynamic nature of the relationship between policies and their influence on PA, including the potential for feedback loops and systemic adaptations, a systems approach generates interest in strategic policy levers that will maximise change.[26] Methodologically, it places value upon inductive, practice- based insights concerning the nature and operation of policy systems, that can be obtained through studies undertaken collaboratively by researchers and policy makers.[27,28]

Australian Systems Approach to Physical Activity (ASAPa) is a national project that supports the development and alignment of policies, programs and surveillance addressing PA at the population level. The first stage of this project is an audit and analysis of policies that promote PA across sectors and jurisdictions (State, Territory and Federal), conducted with input from policy makers. Recognising that there is a continuum of systems science applications from simple cognitive mapping through to more complex dynamic modelling,[29,30] this study is located within the conceptual, ST end of the systems science continuum (rather than the dynamic modelling end). This paper reports the findings of the audit and reveals how PA has been addressed and embedded within the policies of different sectors and jurisdictions. Based on this, it is possible to determine the extent to which the broad mix of policy actions prescribed by GAPPA are in place in Australia. Further, an examination of policy content, leadership, resourcing, governance and monitoring, allows identification of opportunities to strengthen the alignment, implementation and impact of policies to address population physical inactivity.

METHODS

Scope of policies included in audit

Documents were included in the audit if they were policies relevant to PA. Policies were defined as written documents representing a commitment to a course of action, adopted by government or non-government agencies that contain goals/objectives, and priorities, strategies and/or actions for achieving those goals.[19,22] Documents that did not meet this definition were excluded, which were mainly resources and guides. Policies that impact on population level PA may be located in diverse sectors and may seek to specifically promote PA or more indirectly support PA by influencing the environments in which people work, commute, and spend their recreation. For the purposes of this audit, policies were considered relevant to PA if they explicitly described an intent or recognised the potential, of the policy to impact PA. To ascertain this, in-text searches were conducted for references to PA and related words such as ‘active’, ‘cycling’, ‘walking’, ‘walkable’, ‘sport’, ‘exercise’, ‘mobility’, ‘liveable’ and ‘chronic disease’, and then read for surrounding context to determine whether such intent or recognition was being expressed. Policies

applying only to children and adults less than 18 years were excluded, as PA and related indicators for this age group are already monitored under a separate, policy-informing initiative known as 'Active Healthy Kids Australia'.[31] As a result, education policies were largely excluded from this audit, although PA actions relevant to adults could still be addressed by other policies in the education domain (e.g., by promoting shared use planning of education institutions and their sports or PA-related facilities, or incorporating PA education into pre-service training for medical professionals).

In Australia, a 3-tiered system of government applies, meaning that policies relating to PA may be developed at the national (Federal), state (6 States and 2 Territories) and local level (comprising over 500 local governments).[32,33] For the purposes of this audit, the plethora of policies developed at the local government level were excluded to focus on policies with a regional or national focus. Policies developed at the State level but with only sub-State applicability were similarly excluded unless they covered a large metropolitan area, addressed multiple sub-regions, or were developed in accordance with an overarching policy (in which case, that overarching policy was audited). Other documents excluded were those that were in draft form, no longer current, or were classified as departmental strategic plans.

Identification of documents

The process for the identification of PA-relevant policies comprised 3 stages: initial identification by government representatives at information gathering workshops, desktop searches, and a final verification and further identification of relevant documents by government representatives.

Stage 1: Initial identification

Two workshops, each of one day's duration, were held in May and August 2018 to elicit information from government agencies about PA-related policies and programs in their jurisdiction. Invitations to the workshops were extended to members of the National Physical Activity Network (NPAN) (an Australian physical activity policy alliance), senior public servants recognised as directly involved in PA policy making, and (for the second workshop) advocates from major health-focused non-government

organisations (NGOs). A total of 33 government representatives attended the workshops, representing each of the State, Territory and Commonwealth jurisdictions in Australia, and health (n=14), sport (n=12) and planning/transport (n=7) sectors. Nine representatives from 8 NGOs attended the August workshop. Government representatives described and shared information about policies and large-scale programs relevant to PA, that were applicable to adults 18 years and over, and in force within their jurisdictions in the last 5 years. This was through presentations delivered by the Government representatives and an interactive, small groups exercise requiring participants to identify and map the current policy actions and programs to promote population PA in their jurisdictions, against the 8 domains comprising the '7 Best Investments for Physical Activity'[34] and the workplace setting.[35] Documents identified from the workshops were collated into a spreadsheet, and internet searches conducted to locate copies of the target documents. Where a document could not be located, it was recorded and noted for follow up under Stage 3. Websites of represented NGOs were also reviewed for PA-relevant policies. NGO policies were included in the audit if they were formally adopted by the NGO (as opposed to providing a blueprint for others, or designed to be an advocacy tool), and the NGO had resources to implement the policy actions proposed.

Stage 2: Desktop searches

Other potentially relevant policies were identified based on other documents named in PA-relevant government policies from Stage 1 as forming part of their policy context, the Appendices of a recent report mapping transport, planning and infrastructure policies against liveability domains in 4 Australian States,[36] recent commentary reporting on developments in healthy planning policy in New South Wales,[37] and the database of PA policies relevant to Aboriginal Australians located at Health*InfoNet*.[38] Internet searches were conducted to locate copies of these policies, and a record kept of those documents unable to be located that appeared to be PA-relevant. Where other policies were discovered incidentally in the process of conducting these searches, they were also considered for inclusion. Additional keyword internet searches were conducted in policy areas or for subject matter that could reasonably be expected to address PA (e.g., searches for State and Territory level sport and active recreation plans were prompted by the

existence of a National framework[39] requiring each State and Territory jurisdiction to develop such plans; searches for infrastructure-related policies in some jurisdictions were prompted by the existence of PA-relevant infrastructure policies in other jurisdictions, similarly searches for policies specific to particular subpopulation groups such as those with a disability, older people and women were prompted by the identification of PA-relevant policies for these groups in some jurisdictions). Keyword searches generally comprised searching the name of a particular State and Territory jurisdiction, and relevant keywords (in relation to the aforementioned examples, these included keywords such as 'sport and active recreation plan', 'infrastructure strategy' and 'disability/ageing/women strategy'). Statutory instruments were excluded from consideration in Stage 2.

Stage 3: Consolidation and validation

All PA-relevant policies identified from Stages 1 and 2 were consolidated for each jurisdiction and mapped against the policy areas of Health, Transport, Environment, Sport, Planning/Infrastructure, Education, Priority Groups and Other. In August 2018, government representatives from the workshops were emailed a copy of the spreadsheet and requested to review the list of policies that had been included for their jurisdiction, and to identify any other policies relevant to PA, seeking the advice of other government departments where necessary. These representatives were also asked to supply a copy of those documents which could not be located using internet searches, or to otherwise advise on their status. Responses from all jurisdictions were received by October 2018.

Audit process

An audit tool was developed to identify policy content in a systematic and consistent manner, according to a defined set of criteria. Criteria were based on elements identified as relevant for effective PA or public health-related policy[19,34,40,41] and aimed to inform an overall understanding of the current PA policy landscape in Australia with regard to the broad mix of themes and actions in GAPPA.[10] The tool comprised general criteria relating to the policy overall, and more specific criteria relating to the PA-

relevant components (Supplementary Table 1; available online). Audit fields and categories were refined through discussion across the authors to resolve ambiguities in application of the tool, and the modified criteria were re-applied to documents already audited. The policy audit was primarily conducted by [Blinded for review]. Where related documents were available in direct connection with the primary document (e.g., an action plan or monitoring framework), these documents were analysed along with the parent document as one policy. When assessing the agencies involved in policy development, documents developed vertically (i.e. by agencies from the same sector but across different levels of government) or between a State government department and local government, were categorised as 'Other' rather than 'Whole-of-government'. An inter-rater agreement exercise was undertaken to determine percent agreement[38] in respect of the policy domain and policy mechanism fields, for a sample of 40 documents selected to represent a range of jurisdictions and sector leads. Inter-rater agreement was 80% for the policy domain fields and 82% for the mechanism fields. Audit data were analysed using IBM SPSS Statistics 24.

RESULTS

Overview of included documents

A summary of documents identified and screened for the policy mapping audit is presented in Figure 1. Overall, 110 documents were included as PA-relevant policies and 48 excluded for reasons shown. Table 1 shows that most of these policies were developed at the State or Territory level (n=94, 86%), noting that this comprises 8 jurisdictions and local government policies were excluded from this audit. Most policies specified a timeframe of 3 or more years (n=72, 65%) although 31% (n=34) failed to specify a timeframe. Based on their stated goals and strategies, most policies (n=75, 68%) were aimed primarily at the whole-of-population level and targeted general health and wellbeing (n=93, 85%), with few dedicated to specific subgroups or particular chronic conditions (Table 1). Although all documents included in the audit were 'policies' for the purposes of this study, few used the word 'Policy' in their title (n=8, 7%), with other documents variously labelled as a 'Plan' (n=37, 34%), 'Strategy' (n=36, 33%) or 'Framework' (n=20, 18%).

Policy development

Table 2 shows the main sectors involved and coordination/leadership approaches used in the development of PA-relevant policy. Many documents (n=45, 41%) were developed by a single agency, whilst a cross-agency or whole-of-government approach was apparent in 46% of documents (n=51). The health sector led the development of the greatest number of PA-relevant policies (n=30, 27%) followed by the planning/infrastructure sector (n=24, 22%).

Approaches to addressing PA

As shown in Table 4, a small proportion of documents (n=17, 16%) included a primary objective with a specific focus on increasing PA (e.g., to be the most active State), which was mainly the case in policies led by the sport sector. Most policies facilitated PA as a co-benefit of achieving another objective that was not focused on PA (n=63, 57%) (e.g., to enhance liveability; achieve a safer road system), which was mainly evident in planning, environment and transport sector-led policies. PA was a contributory factor towards achieving the policy's primary objective in the remaining documents (n=30, 27%) (e.g., to prevent obesity; reduce cardiovascular morbidity and mortality), which was mainly the case in health sector-led policies. Very few defined PA (n=3, 3%) or referred to the national guidelines on PA (n=19, 17%).

The target groups of PA-relevant policy actions were mainly providers (e.g., other policy makers, clinicians, practitioners) (n=96, 87%), and the general population (and/or a specific subgroup) (n=81, 74%). Forty-six documents contained PA-relevant policy actions aimed at one or more population subgroups, such as Aboriginal populations, those with a disability, older adults, and women. Fewer documents contained PA-relevant actions aimed at individuals/families (n=23, 21%) and peak bodies (representative agencies for members with allied interests, such as advocacy groups, industry bodies, and sporting or professional associations) (n=40, 36%).

PA-relevant policy actions were classified according to which of 8 PA policy domains they addressed. Domains were derived from the '7 Best Investments for Physical Activity' identified by the International

198 Society for Physical Activity and Health (ISPAH),[34] and from the GAPPA,[10] and included the workplace
199 setting in recognition of the evidence supporting its inclusion as an additional policy domain.[35] As shown
200 in Table 2, the policy domains most commonly included within our classification were urban design and
201 infrastructure, and transport and environment, with over 50% of policies addressing either or both of these
202 domains. The least frequently addressed domains were workplace, primary and secondary healthcare, and
203 education. Most of the policies directed at the primary and secondary healthcare domain were led by the
204 health sector (n=20; 77%), with few policies led outside the health-sector contributing to this domain. In
205 contrast, the main contributors to the urban design and infrastructure domain included policies that were
206 led by the planning and infrastructure sector (n=24, 36%), as well as other sectors such as transport (n=14,
207 21%) and health (n=10, 15%). Other key domains addressed in policies led by the health sector included
208 mass media and public education (n=17, 57%), workplaces (n=14, 47%) and community-wide programs
209 (n=14, 47%). PA-relevant actions were classified according to the underlying mechanisms for their
210 implementation, but could not be discerned in some instances due to imprecise descriptors (e.g., 'develop
211 and implement actions to address racism in sport and recreation', 'develop and support opportunities for
212 sport and recreation'), or because they were framed as scoping measures (e.g., 'investigate and consider
213 fiscal policies with the potential to remove barriers to participation', 'review existing fare structure to
214 make public transport more convenient') or as broad strategic directions. Examples are provided in
215 Supplementary Table 2 (available online) to illustrate the types of actions described by documents, which
216 were regarded as addressing particular domains or using certain mechanisms. Supplementary Table 3
217 (available online) contains examples of PA-relevant policies in Australia, mapped against the GAPPA
218 actions and the key domains to which they relate. It has been supplemented with additional examples of
219 programs, including those applicable to children and young adults less than 18 years, as identified from the
220 2018 Active Healthy Kids Report Card[31] and PA programs identified by stakeholders at the national
221 workshops.

222 **Implementation and evaluation**

Shared responsibility, such as where lead and partner agencies were specified, was the most commonly identified approach to implementation (n=45, 41%; Table 3). Where implementation was broadly described as 'shared' without delineating specific responsibilities, this was classified as 'None specified'. Adequate delineation of responsibility for the PA-relevant goals or actions of the policy, was noted in 63% of audited documents.

Over half of the documents described some form of coordination body for implementation and/or monitoring, with functions such as providing oversight, advice, support, and/or leadership. The most common of these arrangements was a governance committee (n=34, 31%), membership of which was generally described as including cross-agency representation and in some cases also representation among external stakeholders (e.g., peak bodies, NGOs, private sector, community members). Few documents described independent governance committees, where governance was through non-government stakeholders or a body with statutory independence (n=5, 5%).

Most documents indicated some form of commitment or intention to monitor and/or report on the progress of implementation and/or outcomes (Table 3), although in many cases, the processes for monitoring were still to be developed or were not described in detail. Verification of the implementation of intended monitoring processes was out of scope for this project. Eleven documents were regarded as having regulatory enforceability (e.g., where monitoring, implementation and/or reporting was or is mandated by governing legislation).

Documents were assessed for the evaluability of their PA-relevant goals or actions. Goals/actions were determined to be evaluable if they were described with sufficient specificity to render them amenable to evaluation. This could be established by referencing relevant data sources or indicators even if those indicators did not specify the desired direction of change or target. Examples of evaluable goals/actions included those which referenced indicators such as: the proportion of adults who are sufficiently physically active; increases in the number, frequency and diversity of people cycling for transport; and percentage of the population living within 30 minutes by public transport of a city or major metropolitan centre. Less

than half of the documents were considered to contain evaluable PA-relevant goals/actions (Table 3). Goals/actions that were not considered evaluable included: those where indicators were still to be developed or were not publicly available or provided for review; indicators that were not specific to the policy but referenced those of other policies towards which the policy was intended to contribute; or those that only contained implementation indicators without any associated reach and/or impact or outcome measures.

The majority of policies (n=67, 61%; Table 4) did not describe any resourcing or funding arrangements or only expressed a general statement of intent to resource the policy, such as by using wording to the following effect: 'investment decisions will be guided by policy priorities'; 'financial commitment will be commensurate with need'; 'implementation will occur within the agency's resource capability'; 'funding allocation will be the subject of further analysis and budgetary consideration'. A commitment to funding was expressed if, for example: a dollar amount was allocated to one or more of the policy actions; an amount had been budgeted for implementation of the policy overall; the policy contained actions to procure funding; or reference was made to pre-existing arrangements or sources for funding. The sustainability, availability or sufficiency of funding for the duration of the policy or implementation of policy actions, was not ascertained.

Table 4 shows the level of resourcing commitment described by policies, according to the relationship of the policy's primary objectives to PA, and by the type of sector leading development of that policy. The findings indicate a general lack of consideration or explicit commitment to funding/resourcing, across sectors regardless of the importance of PA to the document in terms of its relationship to the policy's primary objectives. Notably, 11 out of 17 policies which had a primary objective of increasing PA either did not describe any resourcing or funding, or only expressed a general statement of intent to resource the policy (Table 4). Most of the policies led by the key sectors for PA-relevant policy development (Table 1) also lacked express consideration of or commitment to funding/resourcing (Table 4).

DISCUSSION

GAPPA calls for jurisdictions worldwide to employ a coordinated, whole-of-system approach to ensure effective implementation of its recommended actions at national and subnational levels.[10] In Australia, no formal national policy framework or governance system currently exists to coordinate a comprehensive approach to PA. A considerable challenge to achieving the desired outcomes in Australia (and countries such as Canada and Germany), is its federated government structure which comprises separate central and regional governments. It is perhaps revealing of the nature of this challenge, that few policies in this audit (while relevant to PA) referred to the national guidelines on PA which have been in place since 2014. Nonetheless, and despite the fact that most policies in this audit predated the release of GAPPA, this study found indications of cross-sectoral approaches to developing PA-relevant policy at State/Territory and Federal levels, and consideration of multi-strategic policy interventions (addressing multiple domains and/or mechanisms) that are consistent with criteria for successful PA policy.[18,20,42] These findings suggests a level of appreciation across jurisdictions and sectors about some of the co-benefits associated with addressing PA within other agendas, and existing linkages that can be leveraged to develop the comprehensive and integrated approach to PA that is essential for impactful policy development and implementation.

Perhaps the clearest sign of the integration of PA into the policies of other sectors is in relation to the built environment. Evidence of this is shown by the leadership demonstrated by the planning and transport sectors in developing PA-relevant policy, coverage of 'urban design and infrastructure' and 'transport and environment' as key policy domains and use of infrastructure/service delivery as one of the main policy mechanisms. These provide positive indications of a policy focus geared towards supporting active environments, which is one of the core components of GAPPA[10] and an important means to achieving scale in PA interventions and population reach.[43-45] Analyses conducted internationally have similarly revealed evidence of integration of PA into multiple agendas such as education, sport and health, but more limited evidence of integration in the areas of transport and urban planning.[19,20,46] The prominence of supportive PA policy in the transport and urban planning domains in Australia can be attributed to

298 developments over the course of more than a decade, which has seen the emergence of a common agenda
299 and language that has appeared to resonate with these sectors, supported by partnerships with the health
300 sector, a growing evidence base, and advocacy and capacity building efforts by the National Heart
301 Foundation to promote the integration of active living principles in planning and transport policy.[47]

302 Despite these promising developments, a major uncertainty lies in the degree to which many of the
303 identified PA-relevant policies are truly being implemented. Fundamental criteria for successful policy
304 implementation include adequate resourcing, clear delineation of roles and responsibilities and
305 independent evaluation.[18,48] The importance of securing financing for sustained implementation is
306 highlighted in GAPPA as one of the recommended actions for developing 'active systems',[10] however
307 previous analyses have consistently revealed a lack of express resource allocation for PA-relevant
308 policy.[18,19,46] Similar shortcomings were found in this audit, with almost two-thirds lacking a clear
309 commitment to funding. Where included, coordination structures for governance or oversight over
310 implementation and/or monitoring, were rarely independent. In addition, it was not always clear how PA-
311 relevant actions were to be implemented or evaluated, with most policies lacking in specific indicators or
312 data sources to support their evaluation, a limitation that has also been found in previously conducted
313 international policy assessments.[19,20]

314 Across policies, the dominant mechanism for the achievement of PA-relevant objectives was informational
315 in nature, for example through public education and awareness raising or through communication of
316 guidance to assist policy makers and other providers. While most policies described the use of 2 or more
317 mechanisms, there is scope for policy makers to use a wider range of mechanisms consistent with
318 recommended approaches for addressing other public health concerns such as obesity and unhealthy
319 eating.[41,43] Given the limited effectiveness of information-only approaches for increasing population PA,[49]
320 a wide range of mechanisms is likely to be needed to promote PA for different population groups and
321 stages of change of behaviour, which may also help maximise the synergistic impact of interventions (e.g.,
322 fiscal incentives to promote use of new active transport infrastructure may also improve uptake among

those exposed to public education and awareness raising).[50] Efforts to achieve greater breadth in the range of implementation mechanisms adopted, may need to be underpinned by extensive prior dissemination of evidence about the impact or efficacy of different policy actions on PA and how they can be combined for optimal effects.[44]

Other potential opportunities for improvement, can be seen in the degree of attention given in policies to support activity among adults in key settings that include healthcare, workplace and education. This is closely aligned with the 'active people' objective of GAPPA.[10] Under this objective, actions are recommended to support activity among adults in key settings that include healthcare, workplace and education.[10] Healthcare and workplaces were among the least addressed domains in this audit (education policies being largely excluded due to the focus on adult-related policies), which suggests scope for further actions consistent with GAPPA, and ISPAH's '7 Best Investments' combined with the evidence supporting the workplace setting as an additional policy domain.[10,34,35] GAPPA also emphasises the need for focused efforts to improve PA among specific groups identified as being less active.[10] In this audit, most policies were primarily aimed at the whole-of-population level, with few standalone policies for priority groups such as Aboriginal Australians and older adults. While initial efforts at policy development are appropriately conceptualised on a whole-of-population level to shift population level of activity,[46] there is a risk of widening inequalities in the absence of targeted strategies (consistent with principles of proportional universality) to promote PA among inactive sub-groups, particularly those who are socially disadvantaged.[10,46,51]

A systems approach to PA considers not only the breadth and mix of policies, but also the interactions between them which may reinforce or attenuate actions in different parts of the system and across the system as a whole.[52] A comprehensive understanding of all agencies, their interrelationships, and how their interactions can support a policy system for PA is therefore necessary, which could be facilitated by the creation of a national governance group with an imprimatur for cross-sectoral coordination and supported by a cross-jurisdictional communications network together with measures to ensure effective policy

348 governance, coordination and accountability.[8,13] Internationally, some countries have developed national
349 PA strategies that pursue the PA agenda in concert with other policies across sectors (e.g., England's
350 'Everybody Active Every Day'[53], and Finland's 'On the Move National strategy for physical activity
351 promoting health and wellbeing 2020[54]'). In Australia, there are historical precedents of state-based PA
352 frameworks and taskforces/multi-sector coalitions that may provide models for the development of a
353 national framework and coordination structure (e.g., NSW's 'Simply Active Every Day: A plan to promote
354 physical activity in NSW 1998-2002' which was led by the Premier's NSW Physical Activity Task Force,
355 and WA's 'Active Living for all Framework' led by the WA Physical Activity Taskforce[55]). Australia's
356 federal system also lends itself to various cooperative arrangements that may be suitable for facilitating
357 whole-of-government action on PA (e.g., cooperative legislative schemes, framework laws,
358 intergovernmental arrangements, ministerial councils),[32] some of which were evident from the audit as
359 being employed to support nationwide coordinated action on issues such as disability and road safety. By
360 building on the lessons learnt from past experiences and harnessing the existing capabilities and linkages
361 within the PA system, a national strategy (properly resourced and governed) could accelerate Australia's
362 progress towards a stronger, whole-of-system approach to increasing PA in the population.[18,43,46,56] It is
363 important to emphasise the need for proper resourcing and governance to support the success of a whole-
364 of-system approach to PA; cross-government, intersectoral action alone (even with the selection of the
365 right suite of policy actions) will not be sufficient to prevent the common types of strategic failure that
366 have impeded progress towards addressing PA and obesity in Australia and around the world.[48,57] The
367 existence of a cross-government policy platform (e.g. an Intergovernmental Committee or Task Force on
368 PA) is a positive step, but it does not guarantee meeting the criteria for effective policy governance[48] or
369 consider what a whole-of-system perspective in that governance implies.[58]

370 This study has some limitations. Due to the existing, policy-informing work of Active Healthy Kids
371 Australia,[31] policies that were not applicable to adults were intentionally excluded, meaning that education
372 policies were largely absent from this audit. Local government documents were also outside of scope,

373 although an audit previously conducted by one Australian jurisdiction of their local government policies in
374 respect of active living[59] demonstrated the potential value of local community efforts to support PA. In
375 addition, while relevant legislation and other statutory instruments were included in the audit if they were
376 specified by the jurisdictional representatives, desktop searches were not undertaken to obtain a more
377 comprehensive capture. Further identification and analysis of relevant legislation (e.g., planning
378 regulations) may be of value in future research. Other policies were not captured because they did not
379 specifically mention PA, although they may still be relevant to PA. For example, while many jurisdictions
380 have adopted a road safety policy incorporating safe systems principles which help support active
381 environments,[10] not all specifically referred to PA. Policies and policy actions that undermine PA or
382 promote inactivity were also outside the scope of this review. Finally, our analysis was limited to policies
383 in force at the time of completing the final phase of identifying relevant documents for this audit (i.e.
384 August to October 2018) and a review of policy content. It is possible that some of the limitations
385 identified in this audit are being addressed in new or updated policies that are not yet available, and that
386 some steps relating to evaluation and funding of PA policy actions are occurring in practice
387 notwithstanding a lack of detail in policy documentation.

388 **CONCLUSIONS**

389 This study reveals a level of awareness about, and appreciation of, the relevance and importance of
390 addressing PA within the policy agendas of multiple sectors. Encouragingly it has found substantial
391 evidence of policies that align with the 'active environments' objective in GAPPA, however, it identified
392 fewer examples of policy addressing the 'active people' objective, particularly in relation to high needs
393 groups and PA promotion through healthcare and workplace settings. The analysis highlights areas of
394 policy governance, coordination, financing and evaluation that need strengthening, which shows there is
395 considerable progress yet to be made in relation to the 'active system' objective of GAPPA.
396 Notwithstanding the challenges inherent in Australia's federated structure of government, it is essential to
397 be working towards an integrated, whole-of-system approach to increasing PA. This study presents an

example of policy research that can guide these efforts, to support the strategic, cross-sectoral action required to meet the global targets adopted by Australia to achieve a 15% reduction in population levels of physical inactivity by 2030.

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REFERENCES

1. Lee IM, Shiroma EJ, Lobelo F, et al. Effect of physical inactivity on major non-communicable diseases worldwide: an analysis of burden of disease and life expectancy. *Lancet.* 2012;380(9838):219-229. doi: 10.1016/S0140-6736(12)61031-9

2. Ding D, Lawson KD, Kolbe-Alexander TL, et al. The economic burden of physical inactivity: a global analysis of major non-communicable diseases. *Lancet.* 2016;388(10051):1311-1324. doi: 10.1016/S0140-6736(16)30383-X

3. Cadilhac DA, Cumming TB, Sheppard L, Pearce DC, Carter R, Magnus A. The economic benefits of reducing physical inactivity: an Australian example. *Int J Behav Nutr Phys Act.* 2011;8(1):99. doi: 10.1186/1479-5868-8-99

4. Heath G. Evidence-based intervention in physical activity: lessons from around the world. *Lancet.* 2012;380:272-281. doi: 10.1016/S0140-6736(12)60816-2

5. Varela AR, Pratt M, Powell K, et al. Worldwide Surveillance, Policy, and Research on Physical Activity and Health: The Global Observatory for Physical Activity. *J Phys Act Health.* 2017;14(9):701-709. doi: 10.1123/jpah.2016-0626

6. Guthold R, Stevens GA, Riley LM, Bull FC. Worldwide trends in insufficient physical activity from 2001 to 2016: a pooled analysis of 358 population-based surveys with 1.9 million participants. *Lancet Glob Health.* 2018. doi: 10.1016/S2214-109X(18)30357-7

7. Chau J, Chey T, Burks-Young S, Engelen L, Bauman A. Trends in prevalence of leisure time physical activity and inactivity: results from Australian National Health Surveys 1989 to 2011. *Aust N Z J Public Health.* 2017;41(6):617-624. doi: 10.1111/1753-6405.12699

8. Kohl HW, Craig CL, Lambert EV, et al. The pandemic of physical inactivity: global action for public health. *Lancet.* 2012;380(9838):294-305. doi: 10.1016/S0140-6736(12)60898-8

9. World Cancer Research Fund (WCRF)/American Institute for Cancer Research. *Continuous Update Project Expert Report 2018. Recommendations and public health and policy implications.* London: WCRF; 2018. dietandcancerreport.org Accessed Jan 15, 2019.

10. World Health Organization (WHO). *Global action plan on physical activity 2018–2030: more active people for a healthier world.* Geneva: WHO; 2018. https://www.who.int/ncds/prevention/physical-activity/global-action-plan-2018-2030/en/ Accessed Nov 21, 2019.

11. Rutter H, Cavill N, Bauman A, Bull F. Systems approaches to global and national physical activity plans. *Bull World Health Organ.* 2019;97:162-165. https://www.who.int/bulletin/volumes/97/2/18-220533/en/ Accessed Jan 15, 2019.

12. Bennett S. *The politics of the Australian federal system - Research Brief No. 4.* Canberra: Department of Parliamentary Services; 2006. https://www.aph.gov.au/binaries/library/pubs/rb/2006-07/07rb04.pdf Accessed Feb 6, 2019.

13. Bellew B, Bauman A, Martin B, Bull F, Matsudo V. Public Policy Actions Needed to Promote Physical Activity. *Curr Cardiovasc Risk Rep.* 2011;5(4):340. doi: 10.1007/s12170-011-0180-6

14. Rütten A, Abu-Omar K, Gelius P, Schow D. Physical inactivity as a policy problem: applying a concept from policy analysis to a public health issue. *Health Res Policy Syst.* 2013;11(1):9. doi: 10.1186/1478-4505-11-9

15. Vuori I, Lankenau B, Pratt M. Physical activity policy and program development: the experience in Finland. *Public Health Rep.* 2004;119(3):331-345. doi: 10.1016/j.phr.2004.04.012

16. Craig CL. Evolution and Devolution of National Physical Activity Policy in Canada. *J Phys Act Health.* 2011;8(8):1044-1056. doi: 10.1123/jpah.8.8.1044

17. Cavill N, Foster C, Oja P, Martin BW. An evidence-based approach to physical activity promotion and policy development in Europe: contrasting case studies. *Promotion & Education.* 2006;13(2):104-111. doi: 10.1177/10253823060130020104

18. Bellew B, Schöeppe S, Bull FC, Bauman A. The rise and fall of Australian physical activity policy 1996–2006: a national review framed in an international context. *Aust New Zealand Health policy.* 2008;5(1):18. doi: 10.1186/1743-8462-5-18

19. Daugbjerg SB, Kahlmeier S, Racioppi F, et al. Promotion of Physical Activity in the European Region: Content Analysis of 27 National Policy Documents. *J Phys Act Health.* 2009;6(6):805-817. doi: 10.1123/jpah.6.6.805

20. Bull FC, Milton K, Kahlmeier S. National Policy on Physical Activity: The Development of a Policy Audit Tool. *J Phys Act Health.* 2014;11(2):233-240. doi: 10.1123/jpah.2012-0083

21. Bull FC, Milton K, Kahlmeier S, et al. Turning the tide: national policy approaches to increasing physical activity in seven European countries. *Br J Sport Med.* 2015;49:749-756. doi: 10.1136/bjsports-2013-093200

22. Christiansen NV, Kahlmeier S, Racioppi F. Sport promotion policies in the European Union: results of a contents analysis. *Scand J Med Sci Sports.* 2014;24(2):428-438. doi: 10.1111/j.1600-0838.2012.01500.x

23. Bagnall A-M, Radley D, Jones R, et al. Whole systems approaches to obesity and other complex public health challenges: a systematic review. *BMC Public Health.* 2019;19(1):8. doi: 10.1186/s12889-018-6274-z

24. Rutter H, Savona N, Glonti K, et al. The need for a complex systems model of evidence for public health. *Lancet.* 2017;390(10112):2602-2604. doi: 10.1016/S0140-6736(17)31267-9

25. Wutzke S, Morrice E, Benton M, Wilson A. Systems approaches for chronic disease prevention: sound logic and empirical evidence, but is this view shared outside of academia. *Public Health Res Pract.* 2016;26(3):e2631632. doi: 10.17061/phrp2631632.

26. Vandenbroeck P, Goossens J, Clemens M. *Foresight tackling obesities: Future choices—building the obesity system map.* London, UK: Government Office for Science; 2007. https://www.gov.uk/government/publications/reducing-obesity-obesity-system-map Accessed Jan 15, 2019.

27. Green LW. Public Health Asks of Systems Science: To Advance Our Evidence-Based Practice, Can You Help Us Get More Practice-Based Evidence? *Am J Public Health.* 2006;96(3):406-409. doi: 10.2105/AJPH.2005.066035

28. Freebairn L, Rychetnik L, Atkinson J-A, et al. Knowledge mobilisation for policy development: implementing systems approaches through participatory dynamic simulation modelling. *Health Res Policy and Syst.* 2017;15(1):83. doi: 10.1186/s12961-017-0245-1

29. Elsawah S, Guillaume JHA, Filatova T, Rook J, Jakeman AJ. A methodology for eliciting, representing, and analysing stakeholder knowledge for decision making on complex socio-ecological systems: From cognitive maps to agent-based models. *J Environ Manage*. 2015;151:500-516. doi: 10.1016/j.jenvman.2014.11.028

30. Voinov A, Jenni K, Gray S, et al. Tools and methods in participatory modeling: Selecting the right tool for the job. *Environ Model Softw*. 2018;109:232-255. doi: 10.1016/j.envsoft.2018.08.028

31. Active Healthy Kids Australia. Active Healthy Kids Australia website. http://www.activehealthykidsaustralia.com.au. Accessed May 17, 2019.

32. Twomey A, Withers G. *Federalist paper 1 Australia's federal future: Delivering growth and prosperity.* Melbourne, Victoria: Dept of Premier and Cabinet; 2007. Accessed Dec 18, 2018.

33. Australian Statistical Geography Standard (ASGS): Volume 3 - Non ABS Structures, July 2016. Australian Bureau of Statistics website. http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/1270.0.55.003~July%202016~Main%20Features~Local%20Government%20Areas%20(LGA)~7. Accessed 7 Feb 2019.

34. Global Advocacy for Physical Activity (GAPA) the Advocacy Council of the International Society for Physical Activity and Health (ISPAH). NCD Prevention: Investments that Work for Physical Activity. *Br J Sports Med.* 2012;46(8):709-712. doi: 10.1136/bjsm.2012.091485

35. Bellew B. Managing health and wellbeing in the workplace: an Evidence Check rapid review brokered by the Sax Institute for SafeWork NSW; 2018. https://www.saxinstitute.org.au/publications/managing-health-wellbeing-workplace/ Accessed Jan 23, 2019.

36. Arundel J, Lowe M, Hooper P, et al. *Creating liveable cities in Australia. Mapping urban policy implementation and evidence-based national liveability indicators.* Melbourne, VIC: Centre for Urban Research (CUR) RMIT University;2017.

37. Harris P, Harris E, Riley E, Kent J, Sainsbury P. With health assuming its rightful place in planning, here are 3 key lessons from NSW. In: The Conversation; 2018.

38. Edith Cowan University. Australian Indigenous HealthInfoNet. https://healthinfonet.ecu.edu.au. Accessed 24 Aug, 2018.

39. Commonwealth of Australia. *National Sport and Active Recreation Policy Framework*. Canberra: Commonwealth of Australia; 2011. http://www.health.gov.au/internet/main/publishing.nsf/Content/nsarpf Accessed Feb 22, 2019.

40. Bull F, Milton K, Kahlmeier S. *Health-enhancing physical activity (HEPA) policy audit tool (PAT) version 2.* Copenhagen, Denmark: WHO Regional Office for Europe; 2015. Accessed Jan 23, 2018.

41. Mozaffarian D, Angell SY, Lang T, Rivera JA. Role of government policy in nutrition—barriers to and opportunities for healthier eating. *BMJ.* 2018;361. doi: 10.1136/bmj.k2426

42. Milton K, Bauman A. A critical analysis of the cycles of physical activity policy in England. *Int J Behav Nutr Phys Act.* 2015;12(1):8. doi: 10.1186/s12966-015-0169-5

43. Sacks G, Swinburn B, Lawrence M. Obesity Policy Action framework and analysis grids for a comprehensive policy approach to reducing obesity. *Obes Rev.* 2009;10(1):76-86. doi: 10.1111/j.1467-789X.2008.00524.x

44. de Nazelle A, Nieuwenhuijsen MJ, Antó JM, et al. Improving health through policies that promote active travel: A review of evidence to support integrated health impact assessment. *Environ Int.* 2011;37(4):766-777. doi: 10.1016/j.envint.2011.02.00

45. Reis RS, Salvo D, Ogilvie D, Lambert EV, Goenka S, Brownson RC. Scaling up physical activity interventions worldwide: stepping up to larger and smarter approaches to get people moving. *Lancet.* 2016;388(10051):1337-1348. doi: 10.1016/s0140-6736(16)30728-0

46. Bull FC, Bellew B, Schöppe S, Bauman AE. Developments in National Physical Activity Policy: an international review and recommendations towards better practice. *J Sci Med Sport.* 2004;7(1, Supplement 1):93-104. doi: 10.1016/S1440-2440(04)80283-4

47. Giles-Corti B, Whitzman C. Active living research: Partnerships that count. *Health & Place.* 2012;18(1): 118-120. doi.org/10.1016/j.healthplace.2011.09.010

48. Bellew B, Bauman A, Kite J, et al. Obesity prevention in children and young people: what policy actions are needed? *Public Health Res Pract.* 2019; 29(1);e2911902. doi: 10.17061/phrp2911902

49. Brown DR, Soares J, Epping JM, et al. Stand-Alone Mass Media Campaigns to Increase Physical Activity: A Community Guide Updated Review. *Am J Prev Med.* 2012;43(5):551-561. doi: 10.1016/j.amepre.2012.07.035

50. Dunton GF, Cousineau M, Reynolds KD. The intersection of public policy and health behavior theory in the physical activity arena. *J Phys Act Health.* 2010;7 Suppl 1:S91-98. doi: 10.1123/jpah.7.s1.s91

51. Peeters A, Backholer K. How to influence the obesity landscape using health policies. *Int J Obes.* 2017;41:835. doi: 10.1038/ijo.2017.24

52. World Health Organization (WHO). *ACTIVE: a technical package for increasing physical activity*. Geneva:WHO; 2018. https://apps.who.int/iris/handle/10665/275415 Accessed Dec 18, 2018.

53. Varney J, Brannan M, Aaltonen G. *Everybody active, every day: framework for physical activity.* London: Public Health England; 2014. https://www.gov.uk/government/publications/everybody-active-every-day-a-framework-to-embed-physical-activity-into-daily-life Accessed Feb 11, 2019.

54. Ministry of Social Affairs and Health, and Ministry of Education and Culture. *On the move National strategy for physical activity promoting health and wellbeing 2020*. Finland: Ministry of Social Affairs and Health; 2013. http://julkaisut.valtioneuvosto.fi/handle/10024/69943 Accessed Feb 11, 2019.

55. Bauman A, Bellew B, Vita P, Brown W, Owen N. Getting Australia active: towards better practice for the promotion of physical activity. Melbourne: National Public Health Partnership; 2002.

56. Magnusson RS. What's law got to do with it part 1: A framework for obesity prevention. *Aust New Zealand Health Policy.* 2008;5:10-10. doi: 10.1186/1743-8462-5-10

57. Butland B, Jebb S, Kopelman P, et al. *Foresight. Tackling obesities: future choices – project report* (2nd Edition). London, UK: Government Office for Science; 2007 www.gov.uk/government/uploads/system/uploads/attachment_data/file/287937/07-1184x-tackling-obesities-future-choices-report.pdf Accessed May 15, 2019.

58. Keating CB, Katina PF. Complex system governance development: A first generation methodology. International Journal of System of Systems Engineering. 2016;7(1-3): 43-74. doi: 10.1504/IJSSE.2016.076127

59. Fallding J. *A baseline of healthy eating and active living within NSW local government Community Strategic Plans and selected Delivery Programs.* Sydney: New South Wales Premier's Council for Active Living; 2016. https://www.nswpcalipr.com.au/assets/FINAL-A-Baseline-of-Healthy-Eating-and-Active-Living-Within-NSW-Local-Government-Community-Strategic-Plans-and-Selected-Delivery-Programs-v2.pdf Accessed Dec 18, 2018.

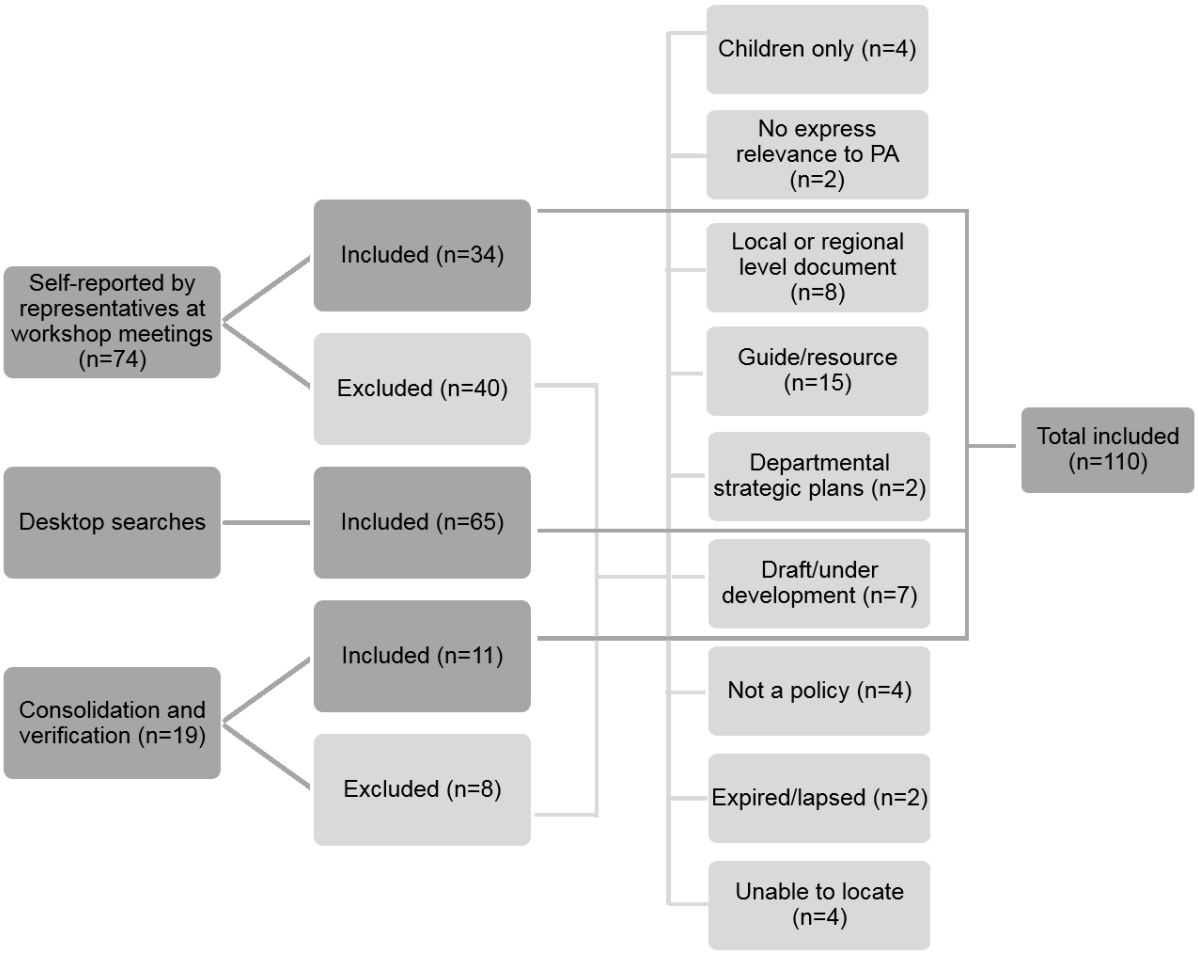

Figure 1. Overview of documents identified and screened.

Table 1. Overview of documents included in audit analysis (N=110)

		No.	%
Policy level	Federal	13	12
	State or Territory	94	86
	Organisation	3	3
Duration	Up to 3 years	4	4
	3-5 years	32	29
	More than 5 years	40	36
	No timeframe specified	34	31
Primary target group	Whole-of-population	75	68
	People with a disability	10	9
	Women	9	8
	Aboriginal	7	6
	Older adults	4	4
	Other	5	5
Primary target condition	General health and wellbeing	93	85
	Overweight and obesity	2	2
	Specific chronic condition	7	6
	Other	8	7
Agencies involved	Single agency	45	41
	Whole-of-government (with lead agency)	35	32
	Whole-of-government (without lead agency)	9	8
	Two to four agencies	7	6
	Other[a]	14	13
Sector lead	Health	30	27
	Planning / infrastructure	24	22
	Transport	14	13
	Sport	11	10
	Cross-sectoral (no identifiable lead)	10	9
	Community services	9	8
	Environment	6	6
	NGO	3	3
	Other	2	2
	Private	1	1

[a] Where policies were developed by agencies from the same sector across different levels of government, this was classified as 'Other' rather than 'Whole of government'.

Table 2. PA policy domains and mechanisms (N=110)

		No.	%
PA policy domains			
Domains addressed	Urban design and infrastructure	67	61
	Transport and environment	58	53
	Sport and recreation	48	44
	Community wide program	36	33
	Mass media and public education	34	31
	Workplace	28	26
	Primary and secondary healthcare	26	24
	Education	18	16
No. of domains covered	0-1	29	26
	2-3	46	42
	4 or more	35	32
PA mechanisms			
Mechanisms described or apparent	Communication or policy dissemination[a]	89	81
	Organisation or coordination[b]	59	54
	Infrastructure or service delivery	46	42
	Fiscal measures[c]	33	30
	Industry regulation	25	23
	Industry quality standards[d]	21	19
	Procurement standards[e]	5	5
	Registration, certification or licensing	1	1
	Marketing, advertising or sponsorship standards	0	0
No. of mechanisms	0-1	30	27
	2-3	56	51
	4 or more	24	22

[a] 'Communication or policy dissemination' included community education and awareness raising initiatives, and dissemination of guidance for implementation by other policy makers/practitioners.

[b] 'Organisation and coordination' included development of collaborative mechanisms, and capacity building of external stakeholders.

[c] 'Fiscal measures' included funding/investment schemes, and tax incentives.

[d] Unlike 'Industry regulation', 'Industry quality standards' were not legally enforceable, and included development and incorporation of best practice guidelines or principles.

[e] 'Procurement standards' included gender targets for equality in governance in sport and recreation organisations.

Table 3. Overview of implementation and evaluation approaches (N=110)

	No.	%
Allocation of responsibility		
For the document overall		
Shared responsibility	45	41
Lead agency	24	22
Nominated position	3	3
Other	8	7
None specified[a]	30	27
Responsibility specified for PA components		
Yes	69	63
No	41	37
Coordination mechanisms		
Independent governance committee[b]	5	5
Governance committee	34	31
Other[c]	22	20
None specified	49	45
Monitoring mechanisms specified[d]		
Monitoring framework	83	75
Regulatory enforceability	9	8
Other	2	2
None specified	16	15
Evaluability of PA goals/actions[e]		
Yes	52	47
No	58	53

[a] Where implementation was described as 'shared' or by the 'Government' without delineating responsibilities of specific agencies, sectors or levels of government, this was classified as 'None'.

[b] Governance committees were regarded as independent if they were only comprised of external (i.e. non-government) stakeholders or were established as an independent body.

[c] 'Other' included where coordination was by an existing department (e.g., the lead agency, Department of Premiers and Cabinet), or if the independent or non-independent nature of the coordinating body could not be determined from publicly available information.

[d] Indications of an intention to monitor and/or report on progress was sufficient to amount to specification of monitoring mechanisms.

[e] Goals/actions were determined to be evaluable if described with sufficient specificity to render them amenable to evaluation, or where intended data sources/tools for evaluation were referenced.

Table 4. Description of resourcing commitment

	N	None specified No. (%)	General statement of intent No. (%)	Commitment to fund policy[a] (not PA-specific) No. (%)	Commitment to fund PA components No. (%)
All policies	110	36 (33)	31 (28)	15 (14)	28 (26)
Relationship of PA to primary objectives					
Primary objective	17	9 (53)	2 (12)	0	6 (35)
Contributory factor	30	9 (30)	11 (37)	5 (17)	5 (17)
Facilitated through primary objective	63	18 (29)	18 (29)	10 (16)	17 (27)
Sector lead					
Health	30	9 (30)	12 (40)	4 (13)	5 (17)
Sport	11	4 (36)	3 (27)	0	4 (36)
Transport	14	1 (7)	4 (29)	3 (21)	6 (43)
Planning	24	7 (29)	7 (29)	1 (4)	9 (38)
Environment	6	2 (33)	2 (33)	2 (33)	0
Community	9	6 (67)	1 (11)	1 (11)	1 (11)
Cross sectoral (no clear lead)	10	4 (40)	1 (10)	4 (40)	1 (10)
NGO	3	2 (67)	1 (33)	0	0
Private	1	0	0	0	1 (100)

[a] A commitment to funding was generally considered to be demonstrated if a monetary amount was allocated to one or more of the policy actions; an amount had been budgeted for overall policy implementation; the policy contained actions to procure funding; or reference was made to pre-existing funding arrangements or sources.